

# Exploration and Practice of Classroom Teaching Reform based on Real Enterprise Cases

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**Abstract:** Classroom teaching is the core link of talent cultivation. How to improve the level of classroom teaching, strengthen students' knowledge construction ability, and meet the talent needs of enterprises is the direction that university teachers are constantly exploring. However, currently many undergraduate classroom teaching contents are disconnected from enterprise practice, and students' job adaptation ability is insufficient. In order to solve the problem of the gap between teaching and practice, this article aims to cultivate applied talents and explore the teaching reform mode of integrating real enterprise cases into undergraduate classrooms. Through the introduction of real cases, innovative classroom teaching, diversified evaluation of teaching results, and iterative updating of teaching content, the entire process design has optimized teaching content, strengthened school enterprise cooperation mechanisms, and achieved the goal of talent cultivation, with strong practical application value.

**Keywords:** School Enterprise Cooperation; Real Cases; Knowledge Building Ability.

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## 1. Introduction

The imbalance between theory and practice in current undergraduate classroom teaching has become a core pain point that restricts the cultivation of applied talents. Most courses still focus on theoretical explanations in textbooks, with teaching content emphasizing concept interpretation, formula derivation, and logical analysis, but rarely connecting with real business scenarios of enterprises[1]. This learning mode that is detached from practice leads to students' learning outcomes showing implicit characteristics, and classroom performance and exam scores cannot truly reflect their job competency. Even if students have solid theoretical knowledge, they may still be at a loss when facing real project scenarios in enterprises, and their learning outcomes are difficult to effectively reflect through practical scenarios. The emergence of such situations has plunged students into employment difficulties and enterprises into recruitment difficulties. Students are not recognized due to a lack of practical experience, while enterprises are constrained in their development due to difficulties in recruiting suitable talents. Over time, this will inevitably form a vicious cycle and seriously deviate from the core goal of cultivating applied undergraduate talents.

In response to the above issues, domestic and foreign universities are also constantly making attempts, hoping to integrate real cases of enterprises into the classroom through deep school enterprise cooperation, and achieve the goal of useful education. The introduction of real cases into teaching abroad originated in the 1870s. Harvard Law School Dean Randall pioneered this method, transforming real cases into teaching cases and cultivating students' reasoning ability through the practical application of analyzing legal provisions, laying the foundation for case-based teaching. At the beginning of the 20th century, Harvard Business School introduced this model under the promotion of Dean Donam. In 1921, the first batch of business case collections were published, and funding from the Rockefeller Foundation further facilitated standardized processes for case development and management, making it a benchmark for

business education. After the 1920s, case-based teaching gradually expanded to fields such as medicine and teacher education. The New Jersey State Teachers College in the United States used it for teacher training, and in 1986, the Carnegie Forum report explicitly recommended it as a core method for teacher training. Since the end of the 20th century, technological empowerment has driven its upgrading, with VR/AR technology creating immersive scenarios and forming a global teaching paradigm that covers multiple disciplines, combines standardization and innovation. The Harvard Case Library has developed into a resource ecosystem covering over 10000 global cases[2].

Domestically, it began in 1979 when universities such as Peking University and Tsinghua University took the lead in piloting law and management disciplines, introducing mature foreign experience but mainly relying on theoretical assistance, with insufficient localization and adaptation of cases. From the 1990s to the early 21st century, it entered a deepening stage. The Ministry of Education promoted interdisciplinary applications and held regular national seminars. In 2008, the China Management Case Sharing Center was established to promote the integration and dissemination of local case resources, and the business administration academic community became the main force of development. Since the beginning of the 21st century, we have entered a period of comprehensive promotion. Driven by the policy of cultivating applied talents, more than 60% of undergraduate universities adopt case-based teaching, and the engineering field relies on the integration of industry and education to jointly build practical cases. In recent years, a large number of college teachers have explored and studied the introduction of real cases into the classroom, and gradually formed a new development pattern of policy guidance, joint construction of schools and enterprises, and local innovation.

## 2. Research Objectives and Significance

### 2.1. Research Objectives

This study focuses on the teaching reform of integrating real enterprise cases into undergraduate classrooms, and constructs a multi-level goal system, including direct goals, core goals, and extended goals. The direct goal refers to the hope of breaking the traditional teaching mode of theoretical lectures by systematically integrating real enterprise cases into undergraduate classrooms, constructing a teaching loop of theoretical learning+case practice+ability transformation, helping students to be exposed to real business scenarios of enterprises in the classroom, and exercising the problem-solving and collaboration abilities required for their positions in advance. The core goal is to introduce real cases, solve the pain points of the disconnect between theory and practice in undergraduate teaching, and the low adaptability of students to employment, narrow the gap between school training and enterprise employment, and ultimately achieve precise alignment between undergraduate applied talent training goals and enterprise job demands. The extended goal refers to the hope of exploring a replicable and promotable set of real enterprise cases into the classroom implementation path through practice, including case screening criteria, classroom teaching processes, school enterprise collaboration guarantee mechanisms, etc., to provide specific operational solutions for similar teaching reforms in undergraduate colleges.

### 2.2. Significance of the Study

This study attaches great importance to curriculum construction and relies on school enterprise cooperation units to jointly carry out curriculum reform. It can enrich teaching resources, enhance the attractiveness of courses to students, improve teaching quality, and optimize the establishment of school enterprise cooperation models. Enterprise mentors can participate in curriculum construction, teaching, textbook writing, case design and other links, forming a win-win model between schools and enterprises, improving talent cultivation models, and helping to create high-quality applied undergraduate talents.

For both teachers and students, it can help them quickly understand the talent needs of the industry, accelerate knowledge updates and iterations, optimize classroom teaching quality, and thus better improve course quality. For students, using real cases to motivate their initiative in learning, allowing them to intuitively feel the application value of the knowledge they have learned, be exposed to corporate culture, cases, and standards in advance, enhance their personal job adaptability, and strengthen their employment competitiveness.

For enterprises, cooperating with universities can provide talent reserves, reduce labor costs, and timely supply undergraduate talents with fast skills and high adaptability for enterprise development. At the same time, real cases can convey the actual talent needs of enterprises, promote the resonance between education and industrial development, and provide talent support for regional development and industrial upgrading.

## 3. Practical Design of Integrating Real Enterprise Cases into the Classroom

### 3.1. Adaptation Issues in Enterprise and Case Selection

The selection of cooperative enterprises is crucial for the introduction of real case libraries, as high-quality enterprises will greatly enhance the representativeness and authenticity of real cases. Enterprises at different levels will also broaden students' employment channels and guide them to adapt to the employment needs of more enterprises. In addition, because each enterprise has many application scenarios during the production process, selecting suitable application scenarios and integrating them with relevant courses to achieve in class scenario reproduction will truly achieve the goal of school enterprise integration in education. When selecting cases, priority should be given to selecting enterprise cases that match the training objectives of undergraduate majors and have difficulty levels suitable for the cognitive level of undergraduate students. The sources can include real projects provided by cooperative enterprises, classic business cases publicly disclosed by enterprises, pre job training resources for employees, etc., to ensure that these cases can cover the core knowledge points of the course and provide operational space for prospective international students to participate, in order to avoid students being unable to get started and achieve the expected results due to the complexity of the cases[3].

### 3.2. Application Issues in Classroom Teaching Implementation

Once the relevant cases are determined, how to implement them in the classroom is a problem that needs to be discussed carefully. Without the equipment of the enterprise, the school cannot fully reproduce the production process of the enterprise. Therefore, it is necessary to communicate with the enterprise to explore whether it is possible to use the existing equipment of the school or adopt various simulation software to reproduce the cases and achieve integrated teaching of the cases while ensuring normal teaching order.

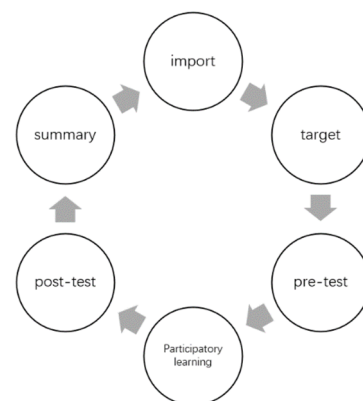


Figure 1. Basic operating process of BOPPPS

When integrating real cases into teaching, it is also necessary to pay attention to the reform of teaching methods. The traditional lecture based teaching mode is no longer suitable for the integration of real case content. Therefore, in specific implementation, it is recommended to use methods similar to BOPPPS. The reform of course teaching is achieved through the implementation of the model, as shown in Figure 1, which involves six steps: introduction, objectives, pre-test,

participatory learning, post test, and summary. Real cases are introduced and discussion based teaching is implemented, encouraging students to build problem-solving abilities through case analysis. The teacher mainly plays a guiding role in the classroom, and most of the classroom time will be led by students. Through multiple stages such as research, discussion, Q&A, and summary, the integration and connection of real cases and knowledge points are achieved, and the independent construction of students' knowledge systems is completed, ultimately achieving the teaching objectives of the course.

### 3.3. Regularly Update and Iterate Issues

Schools need to optimize the level of curriculum and teaching, improve the quality of talent cultivation, while enterprises hope to increase talent reserves, shorten the time for talents to get started, and reduce the operation and maintenance costs of talents. Through the construction of a real case library, it can attract technical experts from enterprises to participate in talent cultivation in advance and strengthen talent output. However, technology and application scenarios are constantly updated, iterated, and changed, so how to achieve the update and iteration of the case library requires continuous exploration in the practical process [4].

Based on the research direction of this study, the following three solutions are proposed. One is to regularly invite enterprise experts to jointly hold seminars to discuss and communicate on course content, teaching resources, case revisions, etc. The second is to invite enterprise experts to give special lectures to students on various real project cases encountered by enterprises, as well as cutting-edge technologies in the industry. The third is to invite corporate mentors to participate in course teaching, to have face-to-face interactions with students, and to cultivate future employees from a corporate perspective, thus truly achieving the goal of pre job training on campus.

## 4. Construction of Evaluation System for Practical Teaching Effectiveness

Relying on school enterprise cooperation enterprises, optimizing teaching content and introducing real cases of enterprises, the operational effect will be the key point of evaluating project implementation. Therefore, this practice evaluated the implementation effect from three aspects: student end, teacher end, and enterprise end, and obtained the following results.

By participating in practical activities related to the course, such as classroom speeches, discussions, and group collaborations, students have strengthened their participation in the course and gained effective recognition of the enterprise positions related to the course. They have also recognized the usefulness of the knowledge and skills they have learned. In addition, after participating in graduation internships and employment, the skill levels of relevant students have also been recognized by the internship units. Taking one of the courses, "Comprehensive Practice of Internet of Things Applications," as an example, through a questionnaire survey, students rated the course highly, with a total of 65 students in the class. The questionnaire results are shown in Figure 2 regarding whether the case is true and whether it is close to the actual engineering scene of the enterprise. The questionnaire results are shown in Figure 3 regarding whether

the case is helpful in understanding the work content of the enterprise.

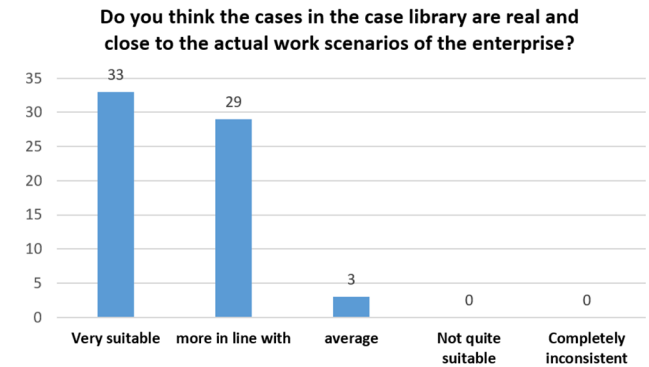


Figure 2. Case Authenticity Questionnaire

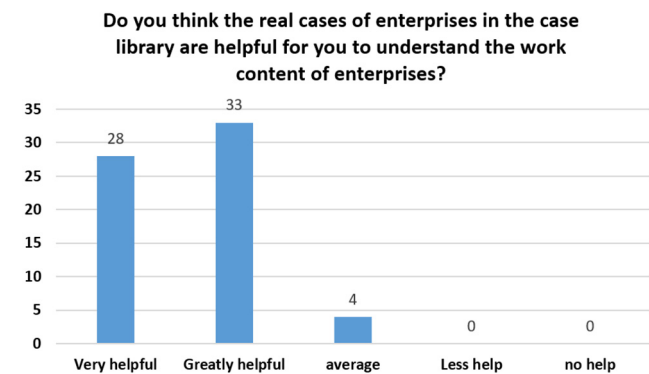


Figure 3. Case support work questionnaire

The teacher side has reformed the original curriculum, optimized the course content, and made the teaching content more closely related to the real application scenarios of enterprises, reflecting the high-level requirements of the course. It can cultivate students' ability to analyze and solve problems, improve their knowledge construction ability, and provide a solid foundation for applying for various teaching reform projects in the future.

By collaborating with universities, the enterprise side integrates the operational scenarios of the enterprise into the classroom, incorporates enterprise cases into the curriculum, and incorporates pre job training content into the campus in advance, reducing the burden of retraining for new employees. The internship employment rate and job suitability of students participating in case teaching have been given high scores [5].

By integrating real enterprise case systems into undergraduate classrooms, it has a significant positive effect on teaching quality, student development, and school enterprise cooperation. At the level of teaching quality, cases use real business scenarios of enterprises as carriers, replacing abstract theoretical explanations in traditional textbooks, allowing students to deepen their understanding of technical principles in the process of analyzing problems and simulating solutions, making course content more in line with job requirements, and providing substantial guarantees for teaching quality; At the student level, real cases have broken the learning dilemma of the disconnect between theory and practice. Students can intuitively perceive the application value of knowledge, significantly improve their recognition of the course, and accumulate job experience in advance through case studies, significantly enhancing their employment competitiveness; At the level of school enterprise cooperation, case development and teaching

implementation require deep collaboration between both schools and enterprises. Enterprises participate in case design to convey employment needs, while universities rely on case teaching to cultivate suitable talents for enterprises. The cohesion between schools and enterprises is greatly enhanced, ultimately forming a tripartite win-win situation where universities improve teaching quality, enterprises obtain high-quality talents, and students enhance their employability, efficiently achieving their respective development goals [6].

## 5. Optimization Suggestions and Prospects

In order to continuously improve the quality of course teaching, based on the practical results of this real case library, the following optimization suggestions are proposed for course construction: firstly, undergraduate colleges need to establish a dynamically updated enterprise case resource library. In addition to arranging dedicated personnel to regularly connect with partner enterprises to obtain the latest cases, artificial intelligence technology can be introduced to upgrade case management. By analyzing students' professional directions, learning progress, and weak links through learning maps and artificial intelligence platforms, intelligent matching of cases to students can be achieved. At the same time, with the help of artificial intelligence's data monitoring function, real-time tracking of the frequency of case usage, student learning feedback, automatic tagging of old cases that need to be updated, ensuring the timeliness and adaptability of cases.

The second is to optimize the case gradient design by combining artificial intelligence technology to address the cognitive differences among students of different grades. When selecting simplified real cases for lower grade courses, lightweight practical scenarios can be built through artificial intelligence virtual simulation technology. When introducing complete project-based cases into senior courses, artificial intelligence technology is used to restore the real project process of enterprises, record student decision-making processes, and generate ability evaluation reports to help teachers dynamically adjust teaching strategies and achieve accurate matching between case difficulty and student abilities.

Thirdly: By utilizing artificial intelligence technology and collaborating with enterprises to design cross disciplinary real-life cases, technology empowers students to break down disciplinary barriers and further enhance their comprehensive abilities, such as practical cases related to IoT security and

industrial IoT. Additionally, AI technology can be used to build course specific intelligent agents to help teachers answer students' questions 24 hours a day, analyze each student's learning situation, provide academic warnings, and design independent learning paths for each student, truly achieving the goal of personalized learning.

## 6. Conclusion

Integrating real cases of enterprises into undergraduate classrooms can not only enhance students' practical awareness and job adaptability, but also strengthen the attractiveness of undergraduate institutions to enterprises. It is a bridge for further deepening school enterprise cooperation and building a teaching level, and an effective path for undergraduate institutions to optimize the cultivation of applied talents. The improvement of course teaching level will fundamentally enhance students' employment rate, meet the talent needs of enterprises, achieve a virtuous cycle, and ultimately achieve the goal of cultivating useful talents.

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